



## Complete Summary

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### TITLE

Ambulatory care sensitive conditions: age-standardized acute care hospitalization rate for conditions where appropriate ambulatory care prevents or reduces the need for admission to the hospital, per 100,000 population under age 75 years.

### SOURCE(S)

Canadian Institute for Health Information (CIHI). Health indicators 2008: definitions, data sources and rationale. Ottawa (ON): Canadian Institute for Health Information (CIHI); 2008 May. 39 p.

## Measure Domain

### PRIMARY MEASURE DOMAIN

Population Health

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

### SECONDARY MEASURE DOMAIN

Access

## Brief Abstract

### DESCRIPTION

This measure is used to assess the age-standardized acute care hospitalization rate for conditions where appropriate ambulatory care prevents or reduces the need for admission to the hospital, per 100,000 population under age 75 years.

### RATIONALE

Hospitalization for an ambulatory care sensitive condition is considered to be a measure of access to appropriate primary health care. While not all admissions for these conditions are avoidable, it is assumed that appropriate ambulatory care could prevent the onset of this type of illness or condition, control an acute episodic illness or condition, or manage a chronic disease or condition. A disproportionately high rate is presumed to reflect problems in obtaining access to appropriate primary care.

## **PRIMARY CLINICAL COMPONENT**

Ambulatory care sensitive conditions (angina, asthma, chronic obstructive pulmonary disease [COPD], diabetes, grand mal status and other epileptic convulsions, heart failure and pulmonary edema, hypertension); hospitalization rate

## **DENOMINATOR DESCRIPTION**

Total mid-year population under age 75 years

## **NUMERATOR DESCRIPTION**

Total number of acute care hospitalizations for ambulatory care sensitive conditions (ACSC) under age 75 years (see the related "Numerator Inclusions/Exclusions" field in the Complete Summary)

## **Evidence Supporting the Measure**

### **EVIDENCE SUPPORTING THE VALUE OF MONITORING THE ASPECT OF POPULATION HEALTH**

- A formal consensus procedure involving experts in relevant clinical, methodological, and organizational sciences
- One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

## **Evidence Supporting Need for the Measure**

### **NEED FOR THE MEASURE**

Monitoring and planning  
Variation in health state(s)

### **EVIDENCE SUPPORTING NEED FOR THE MEASURE**

Canadian Institute for Health Information (CIHI). Health indicators 2008. Ottawa (ON): Canadian Institute for Health Information (CIHI); 2008. 96 p.

## **State of Use of the Measure**

### **STATE OF USE**

Current routine use

### **CURRENT USE**

Federal health policymaking  
Monitoring and planning

Monitoring health state(s)  
National reporting

### Application of Measure in its Current Use

#### **CARE SETTING**

Hospitals

#### **PROFESSIONALS RESPONSIBLE FOR HEALTH CARE**

Physicians

#### **LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED**

Regional

#### **TARGET POPULATION AGE**

Age less than 75 years

#### **TARGET POPULATION GENDER**

Either male or female

#### **STRATIFICATION BY VULNERABLE POPULATIONS**

- Poverty populations
- Rural populations
- Women

### Characteristics of the Primary Clinical Component

#### **INCIDENCE/PREVALENCE**

- In 2006-2007, there were about 87,500 admissions to Canadian hospitals, outside Quebec, for ambulatory care sensitive conditions (ACSC). This means that all of the medical hospitalizations for patients younger than 75 years of age, about 1 in 8 (13%) were for ACSC. Medical hospitalizations comprise one-third (33%) of all hospitalizations and do not include surgical, mental health, obstetric or newborn cases, which make up the rest (67%).
- In 2006-2007, there were 351 ACSC hospitalizations per 100,000 population, down from 451 per 100,000 population in 2001-2002. This difference reflects a 22% drop, after population growth and aging are taken into account. Although this change follows the general trend of decreasing inpatient hospital utilization, the reduction in ACSC hospitalization rates is more than one and a half times greater than the 14% decrease observed for all medical hospitalizations over the same time period.
- ACSC hospitalization rates vary across the provinces and territories. In 2006-2007, these rates ranged from a low of 294 per 100,000 population in British

- Columbia to a high of 1,204 per 100,000 population in Nunavut. They also vary by region - there was about a five-fold variation in rates between regions over the same time period.
- About 20% of patients hospitalized for an ACSC in 2005-2006, outside Quebec, came back to the hospital for an ACSC within one year of their first admission.

## **EVIDENCE FOR INCIDENCE/PREVALENCE**

Canadian Institute for Health Information (CIHI). Health indicators 2008. Ottawa (ON): Canadian Institute for Health Information (CIHI); 2008. 96 p.

## **ASSOCIATION WITH VULNERABLE POPULATIONS**

- In 2006-2007, outside Quebec, ACSC hospitalization rates varied due to several factors. For example:
  - ACSC hospitalization rates decreased as income levels increased. For example, the ACSC hospitalization rate in the least affluent group (521 per 100,000 population) was more than twice as high as the rate in the most affluent group (234 per 100,000 population).
  - ACSC hospitalization rates were 60% higher in rural areas (510 per 100,000 population) than in urban areas (318 per 100,000 population).

## **EVIDENCE FOR ASSOCIATION WITH VULNERABLE POPULATIONS**

Canadian Institute for Health Information (CIHI). Health indicators 2008. Ottawa (ON): Canadian Institute for Health Information (CIHI); 2008. 96 p.

## **BURDEN OF ILLNESS**

Unspecified

## **UTILIZATION**

Unspecified

## **COSTS**

Unspecified

## **Institute of Medicine National Healthcare Quality Report Categories**

## **IOM CARE NEED**

Not within an IOM Care Need

## **IOM DOMAIN**

Not within an IOM Domain

## **CASE FINDING**

Both users and nonusers of care

## **DESCRIPTION OF CASE FINDING**

Mid-year population under age 75 years

## **DENOMINATOR SAMPLING FRAME**

Geographically defined

## **DENOMINATOR INCLUSIONS/EXCLUSIONS**

### **Inclusions**

Total mid-year population under age 75 years

### **Exclusions**

Unspecified

## **RELATIONSHIP OF DENOMINATOR TO NUMERATOR**

All cases in the denominator are not equally eligible to appear in the numerator

## **DENOMINATOR (INDEX) EVENT**

Does not apply to this measure

## **DENOMINATOR TIME WINDOW**

Time window is a single point in time

## **NUMERATOR INCLUSIONS/EXCLUSIONS**

### **Inclusions**

Total number of acute care hospitalizations for ambulatory care sensitive conditions\* (ACSC) under age 75 years

\*Based on a list of conditions developed by Billings et al, any one most responsible diagnosis code of:

- Grand mal status and other epileptic convulsions
- Chronic obstructive pulmonary diseases
- Asthma
- Heart failure and pulmonary edema
- Hypertension
- Angina
- Diabetes

Refer to the "Technical Note: Ambulatory Care Sensitive Conditions (ASCS)" document listed in the "Companion Documents" field for codes used.

**Exclusions**

1. Individuals 75 years of age and older
2. Death before discharge

**MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS**

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

**NUMERATOR TIME WINDOW**

Institutionalization

**DATA SOURCE**

Administrative data

**LEVEL OF DETERMINATION OF QUALITY**

Does not apply to this measure

**TYPE OF HEALTH STATE**

Adverse Health State

**PRE-EXISTING INSTRUMENT USED**

Unspecified

**Computation of the Measure****SCORING**

Rate

**INTERPRETATION OF SCORE**

A lower score is desirable

**ALLOWANCE FOR PATIENT FACTORS**

Case-mix adjustment

## DESCRIPTION OF ALLOWANCE FOR PATIENT FACTORS

Age-standardized rates are reported.

## STANDARD OF COMPARISON

External comparison at a point in time  
External comparison of time trends  
Internal time comparison

## Evaluation of Measure Properties

## EXTENT OF MEASURE TESTING

Unspecified

## Identifying Information

## ORIGINAL TITLE

Ambulatory care sensitive conditions (ACSC) hospitalization rate.

## MEASURE COLLECTION

[Health Indicators 2008](#)

## DEVELOPER

Canadian Institute for Health Information

## FUNDING SOURCE(S)

Canadian Government

## COMPOSITION OF THE GROUP THAT DEVELOPED THE MEASURE

*Employees:* Canadian Institute for Health Information (CIHI) Health Indicators

## FINANCIAL DISCLOSURES/OTHER POTENTIAL CONFLICTS OF INTEREST

None

## ADAPTATION

Measure was adapted from another source.

## PARENT MEASURE

Ambulatory Care Sensitive Conditions (ACSC) Hospitalization Rates [Billings J, Anderson GM, Newman LS. *Recent findings on preventable hospitalizations*. Health Affairs, 1996.]

## **RELEASE DATE**

2006 Jun

## **REVISION DATE**

2008 May

## **MEASURE STATUS**

This is the current release of the measure.

## **SOURCE(S)**

Canadian Institute for Health Information (CIHI). Health indicators 2008: definitions, data sources and rationale. Ottawa (ON): Canadian Institute for Health Information (CIHI); 2008 May. 39 p.

## **MEASURE AVAILABILITY**

The individual measure, "Ambulatory Care Sensitive Conditions (ACSC) Hospitalization Rate," is published in "Health Indicators 2008: Definitions, Data Sources and Rationale." This document is available in Portable Document Format (PDF) from the [Canadian Institute for Health Information \(CIHI\) Web site](http://www.cihi.ca/cihiweb/).

For more information, contact CIHI at, 4110 Yonge Street, Suite 300, Toronto, Ontario, Canada, M2P 2B7; Phone: 416-481-2002; Fax: 416-481-2950; E-mail: [indicators@cihi.ca](mailto:indicators@cihi.ca); Web site: <http://www.cihi.ca/cihiweb/>.

## **COMPANION DOCUMENTS**

The following is available:

- Canadian Institute for Health Information (CIHI). Health indicators 2008. Ottawa (ON): Canadian Institute for Health Information (CIHI); 2008. 93 p. This document is available in Portable Document Format (PDF) from the [Canadian Institute for Health Information \(CIHI\) Web site](http://www.cihi.ca/cihiweb/).
- Canadian Institute for Health Information (CIHI). ICD-9/CCP, ICD-9-CM and ICD-10-CA/CCI codes for health indicators 2008. Ottawa (ON): Canadian Institute for Health Information (CIHI); 2008. various p. This document is available from the [CIHI Web site](http://www.cihi.ca/cihiweb/).
- Canadian Institute for Health Information (CIHI). Technical note: ambulatory care sensitive conditions (ASCS). [internet]. Ottawa (ON): Canadian Institute for Health Information (CIHI); [accessed 2008 Aug 15]. [2 p]. This document is available from the [CIHI Web site](http://www.cihi.ca/cihiweb/).

## **NQMC STATUS**



This NQMC summary was completed by ECRI Institute on October 10, 2008. The information was verified by the measure developer on December 18, 2008.

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